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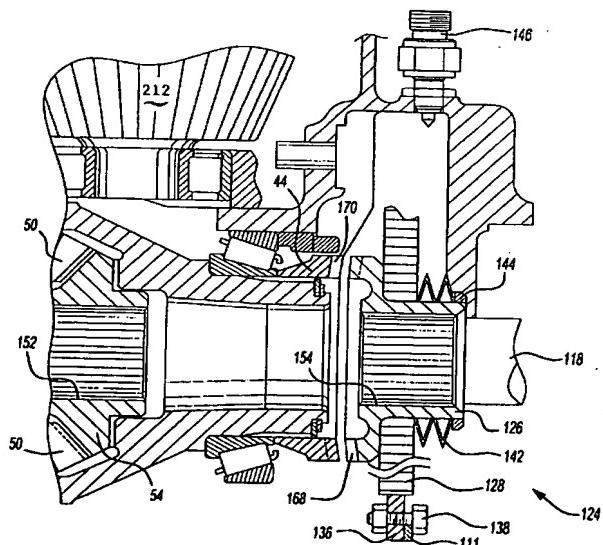
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(54) Title: ELECTRONIC DIFFERENTIAL LOCK ASSEMBLY



(57) Abstract: An electronic differential lock assembly includes a shift collar that is movable in response to an electronic signal from an unlocked position where axle shaft speed differentiation under predetermined conditions is permitted to a locked position where a pair of axle shafts are fixed for rotation together. Speed differentiation is provided by a differential that includes a differential gear assembly supported within a differential case. A coil surrounds the shift collar and is selectively energized to move the shift collar from the unlocked position to the locked position. The shift collar is splined to one of the axle shafts and is selectively splined to the differential case to lock the axle shafts together. The electronic differential lock assembly includes a return spring that automatically disengages the shift collar from the differential case once the coil is no longer energized.

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